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THE GENESEE FARMER.

SATURDAY, AUGUST 24, 1839.

MILK SICKNESS.

A gentleman at the west has announced, that he has discovered the cause and the cure of this formidable disease, which has been so destructive in some parts of the western states, and has, in some few instances, destroyed or driven the inhabitants from some of the most fertile sections of the country. He is claiming considerable sums from the state legislatures for the promulgation of his specific, and should there be no humbuggery about it, he will certainly be entitled to a handsome reward, in those states where the losses from this cause have already been so great.

There are no traces of a similar disease in any other part of the world; and in the United States it has been principally confined to Tennessee, Kentucky, Ohio, Indiana and Illinois, though it is believed some few instances have occurred in Wisconsin, and west of the Mississippi. A multitude of speculations have been made as to the probable cause of this fatal complaint, both among medical men and others; and there is scarcely a poisonous mineral or plant to which it has not in turn been attributed. Public opinion at the west seems to have settled on the opinion, that it was produced by a low shrub or vine assuming at times the form of a climber, and bearing bunches of brown berries. Whatever the poison may be, it causes cattle to quiver, stagger, and die within a few hours. If cows eat of it, the milk is poisoned, the butter is also poisoned, and those who partake of either, are as surely injured, as if they had partaken of the original cause itself. The slightest symptoms are vomiting, and this more severe as the quantity of poison is greater, until violent spasms and death ensues. Dogs and wolves who feed on animals that have died with this disease share the same fate, and to prevent the extending of the evil to dogs and swine, cattle that die with the poison are buried carefully to avoid such results.

In districts where the disease prevails, great care is necessary in killing beef animals, as sometimes the beef will produce vomiting, when the animal is so little affected as to escape notice. To test the presence of the disease, some butchers are in the habit of driving the animal a mile to heat its blood; when if it is poisoned it will exhibit that peculiar trembling so certainly indicative of the presence of the complaint.

In remarking on the formidable nature of this complaint, a writer from the west says,—

"I have seen many farms with comfortable buildings and improvements, entirely abandoned, and their owners fled to other quarters, to avoid this dreadful curse."

But perhaps the most signal instance of its fatality is given in the following extract of a paper from Col. Hinde of Illinois, who has given much attention to the topic:

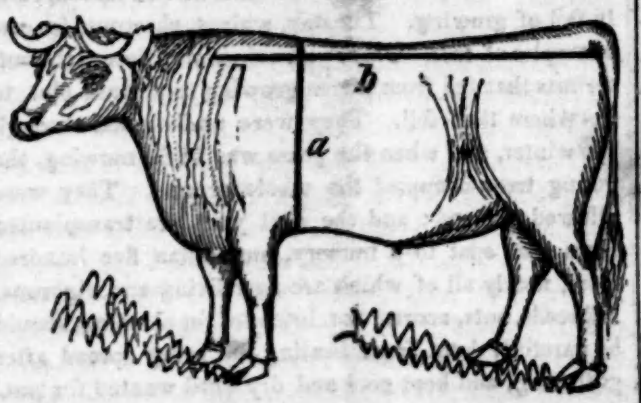
"Calling to see a friend on Darby Creek, Ohio, whom I had not seen for twenty years, he pointed to his wife and remarked—'she is my third wife; I am her third husband; and in yon grave yard lie fifteen members of our families taken off by that dreadful disease, the puking complaint.'"

Surely there must be some unusual fasinations in any place that would lead an individual for so many years to encounter so fatal an enemy to life. Should the announcement of the discovery alluded to, prove well founded, it will be a valuable boon to the west, and save annually great numbers of cattle and many valuable lives.

Estimating the Weight of Cattle.

In a country like ours, where great numbers of cattle are annually bought and sold, under circumstances that forbid the ascertaining their weight with positive accuracy, it must be desirable that some general rules approximating to exactness, should be known, in order to prevent all ground of mistake or collusion on the part of the interested individuals. In England, two or three tables have been constructed by different individuals, founded on the length and girth of the animal at certain points, and based on a vast number of experiments, most carefully made. To illustrate this matter, we have copied from an English work the figure and tables below.

(Fig. 35.)



Girth. ft.	in.	Length. ft.	in.	Renton's Table. stone.	lb.	Cary's Gauge. stone.	lb.
5	0	3	6	21	0	21	00
		4	0	24	0	24	00
5	6	3		27	1	27	00
		4	0	34	4	34	07
6	0	4	6	38	8	38	11
		5	0	43	1	43	00
6	6	4	6	45	9	45	07
		4	9	48	0	48	00
7	0	5	6	64	6	64	07
		6	0	70	5	70	03
8	0	6	6	99	8	99	12
		7	0	107	5	107	06

In taking the girth and length of an animal the manner is as follows:

"The girth is taken by passing a line just behind the shoulder blade, and under the fore legs: (see line on the figure,) this gives the circumference of the animal.—The length is taken along the back from the foremost corner of the blade bone of the shoulder, in a striaght line to the hindmost point of the rump, or to that bone of the tail that plumbs the line with the hinder part of the buttock."

These lines are then measured by the foot rule, and the weight can readily be calculated from the tables. Some slight difference in weight may be traced in the tables, and also in another one calculated by M'Derment, but the agreement is sufficiently close to show that no material error can exist. The tables, according to the English mode of reckoning, are calculated upon the stone of 14 lbs. avoirdupois. Thus, if the girth is 6 feet and the length 5 feet, the weight will be 43 st. 1 lb. or 603 lbs. Mr. Renton, in his 'Grazier's Ready Reckoner,' states that for a half fattened ox, one stone in every twenty must be deducted; and when they are very fat, one twentieth may be added. No tables can, however, be at all times implicitly relied upon, as there are many circumstances connected with the build of the animal, the mode of fattening, &c. that will influence the measurement, and consequently the weight. As a general guide, such tables must be useful to the farmer or grazier, for whose use they are of course principally intended.

Dutcher's Prairie Plough.

In the last volume of the Farmer, we noticed this plough, invented by the gentleman whose name it bears, and which was most favorably received at the exhibition of the American Institute at New-York, as promising a great desideratum in the agriculture of the west, viz. the breaking up of the prairies, whether of the high or low kind, without the enormous expense arising from the amount of team demanded where the common plough is used, which that operation has hitherto required. We are pleased to hear that these expectations are fully realized by the inventor, whose plough has this spring been introduced into Illinois and submitted to the most rigorous experiment. The experiments were made on the farm of Mr. George Foster, near Monticello, and the following extract which we make from a communication in the Alton Telegraph will show the result. After noticing the construction of the plough as described by us, the paper proceeds,—

"The ground where the experiment was made was by no means favorable, much of it being *tough oak barrens*—and in our opinion the common plough could not have been used with any degree of success. The common prairie plough now generally used in Illinois, as all our farmers know, requires the power of 3, 4, 5 and 6 yoke of oxen in prairies entirely free from roots; and we are satisfied the plough of Mr. Dutcher would not in any soil require more than three yoke. On Mr. Foster's farm but two small yoke of oxen were used, and were, to all appearance, sufficient for the labor. We were astonished to witness the facility and neatness with which Mr. Foster was enabled to break his prairie with his plough, with but two yoke of light cattle.—The plough cuts a furrow of 18 inches, and the size of the roots (principally oak and hickory) which the share cut through without stopping the team, was truly *astonishing*. Many of the roots cut in this way were *two* and *three* inches in *diameter*. So well are we satisfied that the invention of Mr. Dutcher will prove an invaluable acquisition to our farmers, that we have no hesitation in recommending it as decidedly the best prairie plough ever introduced into Illinois."

This communication is signed by some eight or ten of the most respectable gentlemen, farmers and others, of the vicinity of Alton, who witnessed the experiment, and we are glad to perceive that extensive arrangements for their manufacture are about being made at that city for the supply of the west with an article so essential to their agricultural prosperity.

SUGAR BEET.

The valuable qualities of this root for feeding animals is beginning to be better understood; and we may reasonably expect that its culture will hereafter be much increased. The common beet and the mangel wurtzel, have both been proved valuable roots, but the sugar beet is much superior to either of the former, as was indeed to have been expected from the greater quantity of saccharine matter it contains. It is cultivated with as much ease and certainty as the common beet, and though usually more difficulty has been found in preserving the beet, or the carrot, than the ruta baga, there is really no more danger of failure where cellars of proper temperature are to be had. For making fine mutton, the sugar beet is said to be unrivalled. We find a letter on this subject in the Whip, from which we make the following extract, which we are confident is worthy the attention of all those who wish to produce from their flocks meat of the first quality. The writer was an extensive mutton grower for the Philadelphia market, and his mutton, before he commenced using the sugar beet, had obtained a high character; at last he commenced the use of this root, and as he says,—

"What surprised him most, was the rapid manner in which they took on fat, when fed on the sugar beet; and when carried to market the saddles excited particular attention, from their very superior appearance. But it was not in appearance only; the meat was of a much better quality, more juicy, and exceedingly tender.—The inquiry was—why, sir, on what do you fatten your sheep?—and when I replied, on the sugar beet, hay, and a small portion of corn, it would generally call forth ex-

clamations of surprise. My first trial was four years since, and since that time I have been a constant grower of the beet. The meat I bring to market is always in demand, and brings several cents more per pound, than that fattened in the old way; and yet, strange to say, some of my neighbors, though I have urged them, will not plant the beet for their stock. I have been benefitted to the extent of several hundred dollars by the introduction of this root—the effects are visible—my neighbors see it, and know it—and yet they stand lookers on, halting between two opinions. But light is breaking in upon us, and of one thing you may be assured, that is, that the time is not far distant *when every extensive stock feeder will also be an extensive root grower.*"

The opinion here last advanced is doubtless a correct one; and we also think, that, whether feeders or not, every cattle grower will, if he consults his own interest, be a root grower. We are convinced, that in this country, as elsewhere, the root culture lies at the basis of all profitable cattle husbandry.

TREE PLANTING.

A correspondent in Hannibal asks for some information on the subject of planting forest trees; the most valuable kinds; the best methods of growing them, &c. &c. Mr. R. will find in the former volumes of the Farmer several papers on the rearing of forest trees; but as the subject is one of great interest, and very many of our present subscribers have not seen the former volumes, we shall give some general principles in as condensed a form as possible, confident that a large proportion of our readers will find it for their interest to cultivate and plant trees to a greater or less extent.

The objects in planting trees are various, and the end to be gained should be kept steadily in view in all the operations. Trees are wanted for timber, fruit, fence, fuel, and for ornament; and the planting must be conducted with reference to these things. For timber, the oak and the elm are the most valuable; for fences, if rails are wanted, the chestnut will give the quickest and most durable growth; if wood for posts is desired, the locust or mulberry are probably as good as can be found; the several kinds of maple or walnut make good fuel; and for ornament, there are none superior to the locust or maple, both of which are valuable in other respects. Evergreens have not as yet been grown in this country to any extent; but it is probable the planting of pines, larches, spruce, and fir trees, in locations suitable for their growth, would be advisable.

Observation shows that different trees demand soils of different and peculiar qualities; some flourishing best on dry and some on wet land; some on clayey and some on gravelly soils; and others on soils in which the component parts are so mixed as to give a good farming soil or loam. The oak and the chestnut will grow well on the same soil, though examination shows that the soil in which the latter comes to the greatest perfection is more sandy, or contains more siliceous matter, than that in which the oak reaches a similar state. So the pine will grow with the chestnut or oak; but to attain its greatest size, requires a soil a little different from either. It is remarkable, that some trees that flourish in the very lightest soils, will also grow in the densest swamps. Thus, the pine is not unfrequently found by the side of the cypress, while it cannot be made to grow on lands that are hard and clayey, though dry and elevated. Soils the most suitable for the oak and chestnut, are not the best for the maple or elm, the last of which with the ash flourish well together, the black ash excepted, which will grow nowhere except in swamps, or rather swales. It is only by ascertaining the nature of the soil we wish to plant, that we can determine the kind of tree most suitable for propagation, and this any farmer, who is an observer of the soils on which the several kinds of trees naturally and vigorously grow, can decide, without the aid of any chemical or mechanical analysis whatever. It would be absurd to plant the white oak in a morass by the side of the cypress, or the chestnut in a stiff clay, or hard-pan bottom, with the maple or elm; and the locust and mulberry require a loose gravelly soil, or the trees will be weak and the wood inferior.

The preparation of any soil for planting trees is simple and plain. It must be made deep, and loose, and rich. If the nursery ground on which the seeds are to be sown is unlike that in which the trees are to stand, or which is proper for them, it should be brought by artificial means as near that state as possible. Thus, if too heavy, it must be trenched or drained; if not friable, deep ploughing or spading must be resorted to; if containing too much clay, gravel or sand may be added; and if not rich enough, or deficient in vegetable matter, manure or mold must be added till it is of the quality desired. If the plants are to be raised from seeds, no matter what the kind may be, the earth must be made fine previously to sowing, and the plants must be regularly hoed and kept free from weeds. Top dressings of compost forked in between the rows will keep the land in good heart, and greatly accelerate their growth. In these respects, the treatment of fruit and forest trees does not essentially differ.

The time of planting the seeds from which the trees are to be grown, is usually the spring of the year, and always as early as the ground can be prepared for their reception. There can be no doubt, that in most cases, if the seeds could be preserved against worms, mice, &c. during the winter, it would be better to plant them in the fall of the year, as they are greatly aided in germinating by the action of the frost. The seeds of trees require but a shallow covering, merely enough to keep them from the air; as those that fall upon the earth, and are scarcely buried, if not otherwise disturbed, rarely fail of growing. The oak, walnut, chestnut, &c. are examples of this. Three years since we allowed the butternuts that fell from a tree growing in a grass plat, to lie where they fell. They were undisturbed through the winter, and when the grass was fit for mowing, the young trees occupied the whole ground. They were allowed to stand; and the next year, we transplanted from that spot to a nursery, more than five hundred trees, nearly all of which are now living and vigorous. All seeds, nuts, acorns, &c. intended for planting, should be carefully kept from heating, by being spread after gathering, and kept cool and dry until wanted for putting into the earth. Some have advised putting seeds in sand, and preserving them dry and from the air in this way; and if the sand is pure and dry, it may answer, but if there is any dampness, the seeds will sprout or mould, and be rendered unfit for planting.

The maple, elm and ash, are usually grown in this country from plants transplanted from the woods, as they can generally be found in sufficient numbers, particularly where lands have been partially cleared, and then by being enclosed, suffered to grow up again to timber. They may, all of them, however, be grown from the seed, sown in beds, and then transplanted to nurseries for cultivation, till their final tranplantation. Where oak or chestnut lands are found, there is no difficulty in perpetuating these trees, as they spring up from the roots of the trees that are cut down, or from seeds already in the earth. Nothing more is required than to keep such lands fenced, until the young timber is beyond the reach of cattle or sheep. On what are called beach, and maple, and elm timbered lands, we frequently hear complaints that no young timber grows up; and the naked state of such woodlands proves the necessity of devising some way of growing young timber to take the place of that which decays by age, or is cut out for timber, fuel, or other purposes. Nothing is wanted for this but to keep woodlands enclosed, so that no animals shall be allowed to feed in them. If the seeds that vegetate are allowed to grow, there will be no want of young trees in any of our woodlands; if cattle or sheep can have access to them, they will certainly be browsed down and destroyed. Let those who wish to grow young timber in their woodlands, (and all who have not a large supply should do this,) pay attention to this, and they will in a few years find their grounds fully occupied.

There is some difficulty in taking trees from woodlands, and putting them in cleared lands; but if proper precautions are adopted in the removal, such as taking as many of the fine roots, and as much earth as can be made to adhere, they will generally succeed. Trees may be transplanted in the spring or fall, as best suits the convenience of the farmer. They will succeed any time after the year's growth of wood is completed, and before the next summer's growth begins. Evergreens will best bear transplanting later in the season. A variety of experiments seem to prove, that they will do better as late as June than earlier in the season. As such trees, growing in woodlands, have usually but few fine roots, the custom has been adopted in Europe, and tried with success here, of cutting around the young tree at the distance of two or three feet, a year or two before removal, in such a way as to divide all the principal surface roots, and thus cause the formation of a great quantity of fine and vigorous roots near the body. The tree is then lifted from the earth, without disturbing the earth on the roots, and is transplanted in perfect safety and certainty of growing.

As in the propagation of the stones producing fruit trees, such as the cherry, plum and peach, the seeds germinate with more certainty after freezing, particularly in our latitudes, the stones should be planted in the fall of the year, and but slightly covered with earth, that this preliminary process may be ensured. In some instances where it was not convenient to plant in the fall, the benefits of freezing have been gained, by mixing them up with wet earth in a proper vessel, and having them frozen through the winter in that state. The danger of being destroyed by vermin may be thus avoided, and if put into properly prepared ground in the spring before germination commences, they vegetate with about equal certainty.

CLUB FEET.

Under the head of 'Interesting Surgical Operations, or something similar, we frequently meet with notices of cures performed by surgeons on diseased feet that come under the title of this notice, and examples of which are very common among children. It is much to be regretted that parents having children with deformed feet, should neglect a cure while young, and allow the disease to remain until the surgeon's knife and a tedious and painful operation are required to remove it, if it is ever attempted. We have known several cases of complete cure in young children, effected by a machine consisting of a shoe and steel springs, adapted to the deformity, and constructed by Mr. William Leslie, a farmer and shoe-maker, formerly a resident in Onondaga county, but now of Volney, Oswego county. The process is simple and philosophical; the implement is made by Mr. L., and the cure is certain, while it is performed with little inconvenience to the child, and for compensation scarcely worth mentioning. We mention this, because deformed feet are a serious evil, and too often treated as incurable.

RHUBARB, OR PIE PLANT.

This is a valuable plant, and should be found in every garden. The original species cultivated was the *Rheum raponticum*, as was found wild in abundance on the banks of the Wolga, in Russia. Several new species have been found in late years, such as the *R. australe*, *R. palmatum*, and the *R. emodi*; but from the earliest ages, the medicinal qualities of the plant appear to have been well understood, and for these virtues it was generally cultivated. Now, though the opinion of its medical efficacy has not perhaps been in the least lessened, it is principally grown for the sake of the stems of its broad leaves, of which extensive use is made in the various departments of domestic cookery. In this country the great demand is for pies, for which they are unrivalled, while in foreign countries the stalks are served up in cream, made into preserves, into tarts, in which form medical men have recommended them as the most cooling and wholesome of any placed on the tables of the opulent, or indeed of any classes. For making preserves, the London Horticultural Register recommends the following mode. Let the stalks, peeled, be cut into squares, put in single layers on a pan, and placed in an oven of a moderate heat for about twelve

hours, and afterwards be put into wide mouthed bottles, with a fifth or sixth part of brown sugar, then covered down with a bladder, and occasionally shaken for the first fortnight.

Of the kinds cultivated, Wilmot's and the Gigantic, numbers 1 and 7 of the London catalogue, are considered the best, as producing the greatest yield and being of good quality; though for some of the more delicate kinds of tarts, Dr. Thompson, who says he has tried all the varieties, gives a decided preference to the palmate leaved variety. The soil has a very great influence on the qualities of the plants; in a strong or very wet one, the plants will incline to a rank flavor, but if in a light rich soil, they will be large and succulent, without being unpleasant flavored in the least.—Rhubarb may be propagated either by seed or offsets from the roots. The first is generally considered the best method; though the last is much practised, and succeds well, if care is taken to retain a good bud on the section removed. The ground must be well trenched and manured; the earth rendered fine and well mixed to a good depth, and the seeds sown or the roots set as early in the season as the earth will allow. If it is intended to grow the plants in the open air, operations must not commence as early as when they are to be forced, a process extensively adopted by gardeners near cities, as bringing the plant early to market.

Rhubarb is forced by means of hot beds, or any of the modes of producing an artificial atmosphere in cold weather, adopted by gardeners; but it is usual to combine blanching with forcing, as giving plants not only of good quality, but of fine appearance. Blanching is accomplished in various ways, all having the same object, that of excluding light from the plants while growing. Large pots turned over the plants, over which manure is heaped, are sometimes used, where blanching and forcing are united. Others cover a bed of plants with an open frame work of wood, on and around which the manure is placed. This mode is preferred, as giving greater scope to the plants, and by embracing a larger area, being less expensive on the whole. Some of those in this country, who have been most successful in the culture of the pie plant, recommend that a barrel from which both heads are removed be set over the plant, and around which the manure must be placed; a board placed close over the top excludes light, and the blanching is effected readily. When additional forcing is required, the top of the barrel as well as the sides may be covered.

Great care must be taken in planting rhubarb, not to have the plants too near. Five or six feet will give better plants than three or four; and it is a good plan to cover the crowns of the plants during the winter with a few inches of rotted manure; thus giving an early start to the vegetation. Little more culture is required after planting, than to keep the beds free from weeds during the summer, and forking in a good dressing of well rotted manure each spring. Dr. Bevan directs that no stalks be gathered the first year, and that they always be cut sparingly towards the last of the season, so as not to exhaust the roots too much. If this is not attended to, spindling weak shoots will be the result.

COLOR OF THE HORSE.

As almost every man has some favorite color for his horses, and tastes are as various as individuals, the color of this animal would be of comparatively little consequence, were it not indicative of the breeding and blood, and of course, in a great measure, of constitution and temper. It has been said that a good horse could not be of a bad color; and in many respects the position is true; still, for the reasons given, there are some colors which experience shows should be preferred. Fashions, however, are mutable, and in no respect are they less permanent than in that of the color of horses. The color of the hair, and that of the skin, is depending on the mucous tissue or network immediately beneath the cuticle, the outer or scarf skin being colorless, and only serving to protect the true skin and ts appendages from friction or injury.

The pure white horse is a very rare animal, the majority of those that appear so having once been grey, and growing white after reaching the age of four or five years. Among the Arabians, a pure white mare is considered almost priceless; as in that case the purity of her blood, and her direct descent from the celebrated steed of the prophet cannot be doubted. Those of the best blood are not large, but beautiful in the extreme, and as gentle and docile as lambs. Introduced into Europe, they have proved of good constitutions, little subject to disease, not of the fleetest kind or the greatest endurance, but excellent for light carriages or the saddle.

Grey horses can be found of every shade from the lightest mixture, or silver grey, to the dark iron grey. The lightest greys show the most clearly their blood of the Arab or barb; are rarely heavy horses, but well built, round bodied, and like those from which they originated, better for the saddle than the harness. The mixture of blood does not, however, appear to have improved their temper, though it certainly has rendered them more hardy. The iron greys have still more endurance than the light greys, and more than their general appearance would indicate, as there is in their build usually quite a departure from the round carcass and close knit frame of the preceding ones. The most common defect in the iron grey is found in the liability of the feet to contraction, which sometimes, though not always, renders them subject to lameness. The dappled grey is usually one of the most beautiful and valuable of the grey horses, being better built than the iron grey, and capable of more endurance than the lighter kinds. For any purpose; for the saddle or the carriage, the farm or the road, there are few better horses than can be found among the dappled greys, and much pains has been taken to improve their blood. A dark dappled grey usually retains his color to old age; the lighter ones grow lighter as they become older. The grey requires to be thoroughly broken, and will bear less trifling with than most other horses; appearing to have a tinge of viciousness in his disposition, which, unless checked when young, is apt to become troublesome with age.

Roan horses are such as have their hair composed of the white, bay or red, and the black; and it, of course, admits of a great variety of shades. In some roan horses the mixture appears to be a natural one, the hairs of the different colors intermixed, while in other cases the bay or the black appears to have been sprinkled over the others. In such roans the individual hairs are frequently of more than one color. Roans are generally pretty horses, good tempered, but are not remarkable for endurance. The strawberry roan is a mixture of sorrel with white, sometimes handsome, but not calculated for hard labor or severe fatigue. Pied horses are not so well liked as greys or roans, but when well matched, they sometimes appear well as carriage horses.—Their value, of course, depends on their breed. The cream colored, or Hanoverian horse, is remarkable for the white iris and red pupil of his eye, and is appropriated to the use of the royal family in England. He has a heavy, yet perfectly formed body, and is a superb animal; but there is no experience to show whether he would be valuable for any other than the light service assigned him.

The dun horse, especially of the larger size, is much esteemed in England as a good farm or miller's horse, constitution and temper good, feeding well, somewhat of a drone in his movements, of tolerable strength, and on the whole a useful horse. Some duns are shaded or dappled with spots of a darker color; and these having better blood, and more action and life, are much sought after as ladies' horses, being both beautiful and manageable. The chestnut horses are divided into three varieties; the lightest, or the sorrel, usually having more or less white on their face or legs, and generally slenderly made. They have, as a whole, little breeding, and are deficient in hardihood. The next variety has less red and more bay or brown, and is preferred to the former; but though pleasant to ride, is in the harness inclined to be fretful, and of slight endurance, compared with some other horses. The dark chestnut, is as diffierent from the foregoing as possible; fine in the leg, round built, powerful in the harness, of an excellent constitution and endurance, little troubled with disease, unless about the feet, but sometimes having a fiery and intractable temper. This kind of horse is much esteemed as a carriage horse, and when well broken, is one of the best of horses on the farm.

Of all colors, however, the bay horse is the most generally and deservedly esteemed, and in their several varieties they include our very best horses of every kind, carriage, road, farm, or turf. Of bays, the lightest colored are considered the least valuable, showing less breeding, and being less hardy. The proper bay horse, with no white about him, black from the knee and the hocks to the feet, the hoofs of a shining black, is the favorite color, has generally a good constitution, rarely is affected with bad or tender hoofs, and if not faulty in other respects, will turn out a valuable horse for almost every purpose. As the bay approaches the brown, there is usually less show and action, but increased strength and hardiness; and for hard farm work, perhaps more usefulness. This class has usually more substance than the lighter bays, and were the same pains taken in breeding, might be made as handsome a horse, and for ordinary purposes, more valuable.

Brown is not a fashionable color, and no horses, as a body, have so little breeding as these. Owing to this, they are comparatively coarse animals; and though there are some excellent horses among the browns, as a whole, they are only calculated for slow work. The black brown has been more neglected than the common brown, and in making choice of them they require to be examined closely. Some of them have the constitution and good qualities of the bay brown, and where this blood is found, few horses are to be preferred.

The black horse has always been a great favorite, and more pains have been taken in breeding than with many others. The heavy black Lincolnshire horse, principally used in London as a dray horse, is a noble animal in the harness, and could he be rendered more active, would be invaluable, where power and endurance are required. With the exception of the best shade of bays, the black horses, next in size to the Lincolnshire breed, constitute the best horse for the farmer, or the ordinary uses of the carriage or road. The good qualities of these horses have been established by breeding; but of the other varieties of the black horse, there are multitudes of worthless ones all over the country.—Owing to the common black horse being so often a poor creature, some have asserted that animals of this color were more vicious, and more subject to disease and blindness than other horses.

Every worker, or breeder of horses, must be, however, aware, that all conclusions derived from the color of a horse, are liable to be overthrown by fact, so far as individuals are concerned; good horses being found in all the classes enumerated; still, as a whole, there can be no doubt that color forms no inconsiderable criterion by which to judge of the capabilities and value of the horse. With the exception of the pure white, the lighter shades of each variety appear to have less breeding, and be more liable to disease, than the darker ones. They are also more tender, and not so capable of enduring fatigue, or hard labor, or usage. It may be remarked, that white legs and white hoofs are always suspicious signs, usually indicating a poor constitution, animals that are tender-footed, or very liable to become so.—Horses with white feet suffer more from scratches or chapped skin, than horses with darker colored feet or legs; and a white nosed horse will frequently have the white part a mere scab, from feeding among plants having acrid or irritating juices, such as the Johnswort, while the other parts remain perfectly smooth and healthy.

Ezekiel Rhodes states that within ane week after his sugar beet was exhausted, the butter from the three cows was reduced from twenty to fourteen lbs. per week. His butter was in much higher repute while feeding on the sugar beet, than it had ever before been during the winter.

COMMUNICATIONS.

NOTICES OF IMPROVED FARM STOCK.

Having recently made something of an excursion through different parts of our glorious old state, I could not but be struck, by the marked improvement that has taken place within a very few years in its farm stock. A new era seems at last to have begun in this highly important department of agriculture, and those enterprising breeders, who in the nobleness of their hearts, and the disinterestedness of their zeal, first set the example in the laudable undertaking of rearing and diffusing an improved stock, are now beginning to see their efforts crowned with success, and themselves well remunerated for their toils and outlays. May the spirit of improvement continue to spread, till New York can point with the same pride and exultation, to her numerous and high bred herds and flocks, as she now does, to her great commerce and manufactures. Her climate is healthy and reasonably amenable, her soil rich and fertile, and by means of her varied and extensive commerce, every quarter of the globe lies open to her, thereby giving an advantage at importation of improved animals from abroad, that no other state possesses. Why should she not take that rank then at once, in this business, that her position and resources would so fully enable her to do? I cannot think that the wealthy and enterprising farmers of the Empire State will rest supinely much longer, but that they will soon arouse to the good work so well begun, and universally add their own strength and power to it.

The ever increasing and fertile west will afford us a market for a half century to come, and by that time, new regions, now unthought of, will have been opened, supplying new avenues of wants—besides wealth is greatly on the increase with us, and refinement and luxury must necessarily follow, as accompanyments, and why should it not then be expended as liberally in fine animals, as fine horses, furniture, and clothes? Depend upon it, that the farmer who possesses the best bred stock, will soon be the most fortunate man; let him object then no longer to paying high prices, when he is sure to get them back again, with exorbitant interest. No one hesitates at paying $50 or more per acre for land, that a few years ago sold for $10, and why? Because the improvements on and around it, have made it that more valuable, and there is probably more money to be annually realized therefrom, at the former price, than there was originally at the latter.

I have seen a good many single Durham bulls, at different places on my route, and other choice males, such as bucks, boars, horses, &c., but it would extend my notices to too great a length, were I to attempt to particularize. Suffice it to say, that they are generally well patronized, and have proved sources of a good income to their owners, and of great improvement to those who avail themselves of their services. I found that several of these animals, though costing high prices, have paid for themselves in their services at one neighborhood in a single season; this certainly is encouraging, and shows the profits of the business.

Among the larger stocks, the first I visited, was that of Mr. Rotch, of Butternutts, Otsego county, and I may speak of it with the more freedom, inasmuch as he has made up his mind, not to part with a single female from his Durhams for two years at least. I think Mr. R. decidedly the most scientific breeder of any that I have the pleasure of being acquainted with, and his opportunities of studying this great art, have been probably superior to that of other American gentlemen; he having long resided in the neighborhood, and associated with England's great stock dealers, with a reference to perfect himself in this knowledge. He is now engaged in breeding, more for the love of it, and the pleasure that the sight of improved animals gives him, than with a view of adding to his pecuniary interests.

At first sight, his herd perhaps would appear no ways superior to many others, but when one comes to approach and handle the animals, they show that the right direction has been taken. The great essentials are first secured, then come those nice points, that a judge of good breeding only can appreciate. The fine limbs, the flesh that covers them, showing how easily it is taken on, the broad udder, the well developed milk veins, the mellow and yet firm handling, the mild eye, betokening the quiet, placid disposition, in short, a general harmony of parts, and all combining with so much good constitution, and so great freedom from a positive defect, that I must confess myself struck with high admiration. Of the cows, Stella may be the most fashionable and airy, but for downright good solid parts, and yet great beauty of form and color, a bright red, Hesper seemed to me the queen of the herd. Of his stock bull Archer, I will only say, go see him walk, and if you do not come back with a high idea of barn yard aristocracy, then I am no judge in a "talk, sir, upon cattle." Could his progeny speak, like the Cæsar's soldiers, they would be saluting him with the title of Imperator, a name that he would most worthily bear and honor. Archer was out of Mr. R.'s magnificent old imported cow Adeliza, selected in England by himself.

The Devons I found very beautiful, their color like a piece of changeable crimson velvet, or well burnished mahogany. These were selected by his friend, Mr. Ellman, from the celebrated herd of the Duke of Norfolk. The Devons make the best and quickest of working oxen, and are an admirable breed for light soils, and short pastures. Their beef is well marbled and delicate, superior even to that of the Durhams. They are in England an original race, alike beautiful, thrifty, and hardy. The northern parts of the U. S. ought to grow them in preference to any other breed, as best adapted to the taste and wants of its inhabitants, their soil and climate. Select breeders in England get very high prices for them, and with proper care in choosing their stock animals, have succeeded in making them good milkers. For my part, I greatly admire a single cross or two with the Durhams. From cows of this breed, I have seen the richest milk, and nearly of the consistency of cream. They are airy in shape, and of lofty head and horns, reminding one of Virgil's description of the stags his famished hero slew—

Capita alta ferentes
Cornibus arboreis, sternit.

Their heads high borne with lofty branching horns.

I had no conception what a South Down was, till I visited Otsego. Such beauty of form, and finishing of outline, I never before saw in sheep. These were imported from the flocks of that superior breeder of this admirable race, the late Mr. Ellman, who has usually carried off the prizes of England. One of Mr. R.'s bucks cost him $200 to import as a lamb. Mr. E. sold the brother of this in England for 60 guineas, ($300.) So gentle are they bred, as to run up and fawn upon one in entering their pasture, like petted dogs. At a little distance, with their dark brockled faces and feet, they reminded me of Egyptian mutes in white dresses and bare legs. These sheep are very hardy, quick feeders, prolific breeders, with good weight of fleece, and the wool about equal to half or three-fourths blood Merino. Their mutton is the best in the world, lean, tender, and nearly resembling venison. The best Down wedders in England, are fed to 40 lbs. per quarter. Mr. R. doubts whether they will come up so high as that here—I will add, for the reason that we should not probably be as attentive about food. In size, however, they stand second only to the Leicesters. The same remarks as to climate, soil, &c., that I made of the Devons, will suit the South Downs. They are also admirable for crossing with other sheep, especially when hardiness and constitution are sought after. Mr. R. has some excellent crosses thus made with the Merinos and Leicesters.

His Berkshire boar, bred by the Messrs. Brentnalls, is one of the best animals I know in America—large, thick, deep and fine, and a most excellent stock getter. The sow, Fanny Kemble, will go weight for inches, with any thing I have yet seen; I think her very superior in the hams and shoulders, and just the size to suit me; my own ideas, being for *fine* rather than *large*, in any animal but a dray horse, and here I would have *fine* too, if I could.

Mr. Adcock's Leicester Sheep are most admirably bred, very nice in their points, and yet of great weights. There is much other valuable stock in the neighborhood, for the introduction and encouragement of the growth of which, Otsego is principally indebted to Mr. Rotch. The residence of such a man in a community of farmers, is of incalculable advantage to them, and the Butternutts is now reaping a rich reward for its enterprize, in so early embarking in the growing of an improved stock.

To the lovers of nice animals, picturesque hills, clear streams, and charming vallies, I commend a visit to Otsego. Here also is classic ground. The savage murdering in the times of the revolution in Cherry Valley, the home of "The Pioneers," and the residence of their gifted author—seated in a window of his fine old castellated gothic, the scenes of his glory and triumph are spread out before him. There is the clear deep lake, sleeping sweetly at the base of its wild forest clad hills and mountains, there is the noble Susquehannah, swelling from its bosom an ever running fountain of pellucid waters, now first taking up their long and devious course, for the stormy Chesapeake, and there—but gentle reader I must stop. We set out to look at pigs and poultry; these therefore must be the continuation of our theme, and though the talk thereof, may not be quite so *interesting* as the young ladies, Heaven bless them, would have it, still it is by far the most profitable, and will be pursued in our next. A. B. A.

Buffalo, August 17.

HORSES vs. OXEN.

Mr. Tucker—In looking over, recently, an odd number of the New York Farmer, I met with the following extract, from the pen of the Hon. Levi Lincoln, in a letter to John Hare Powel, Esq., of Philadelphia, on the training of oxen for work; and the comparison between horses and oxen, for agricultural purposes. On the latter point he remarks,—

"In respect to what oxen are made to do in a short time, or as an experiment upon their strength, I must refer you to the results of our ploughing matches. With us, (New England) they are but little used upon the road, except in the transportation of heavy loads for short distances, in the same town, or between neighboring towns. One reason why horses are preferred for wagoning on the road, may be that they can be made to travel quicker, and that from the construction of the hoof, they are less liable to lameness than the cloven footed ox, by becoming foot-sore. On the other hand, the patient and steady labor of the ox, finds no substitute in the horse for the service of the farm; and the latter is seldom seen there except in the occasional aid of the ox team, or with the light plough between the rows of corn. The value of a yoke of oxen, or a pair of horses, for use in all the business of a farm, admits of no comparison. So decided is the preference for the former, that I do not believe a single farmer can be found in this extensive agricultural country who performs his labor by horses, without oxen, while there are *hundreds*, I had almost said *thousands*, who make no other use of horses in husbandry, than to furrow for planting, and plough among their corn for hoeing.

Our oxen are kept in a cheaper and less expensive manner than horses."

I beg you will excuse me, if you think I have been extravagant in my quotation. The subject is certainly an important one, when we remember, that an almost incredible amount of labor is necessary to be performed by one or the other, for farming purposes. I would like here, had I time, to notice some of the reasons assigned by farmers, for substituting the horse (which has become so general,) for the ox, for their business. The most prominent one, however, I beg briefly to notice. "Their *incapacity* to labor in warm weather." If the weather is excessively warm, certainly, it would be an objection, at least while it continued. If oxen were properly managed, even then, they might be made to perform quit

as much as the horse. But, Mr. Tucker, I imagine the weather is no warmer, and the days no longer, the difficulties and obstacles to be overcome, not half so great, as they were 20 or more years since. The *fault*, I reckon, is not with the oxen, that they are less serviceable *now*, than they were in the settlement of this country, or for many centuries, but with the age, I mean, "*men and things.*" We are all becoming quite too *furious*, in all we attempt. Farmers and others, are too much inclined to keep pace with rail road cars, our beautiful steamboats, &c. &. Another time, perhaps, I will tell you how we ought all to *move, and how to do it.* I beg leave to submit the following estimate, of the expense of keeping both horses and oxen, with the original cost, together with the necessary utensils for each.

Cost of oxen, say,	$110,00
Interest on the same,	7,50
Cart, yoke and chain	50,00
Shoeing,	6,00
Feed for 4 months, half bushel each per day, worth 20 cents per bushel, consisting of bran, shorts, potatoes, and corn,	24,00
Three tons of hay each, per year, $6,	36,00
	$233,50

Cost of horses, $90 each,	$180,00
Interest on the same,	12,00
Cost of harness,	18,00
Wagon, (complete,)	65,00
Shoeing,	8,00
Feed for 5 months, 15 quarts each per day, at 31 cents per bushel,	57,00
Ditto for 2 months, 3 quarts each, per day, 31 cents per bushel,	4,13
Two ton of hay each, $6,	12,00
	$356,73

If the above estimate is correct, we find a difference of about $123 in the expense of keeping a single team, for the year—quite too large an item to be disregarded by the farmer, as in 10 years, it amounts to $1,230. A similar sum saved in other ways, added together, would enable almost any farmer to give a son, a classical education. The horse is, all are aware, and all will admit, much more subject to disease than the ox, and is often times, in this way, rendered of but little or no value, consequently, the balance must be much in favor of the

Ox.

Comfort of Animals.

Unquestionably, an animal may be well fed, lodged and cleaned, without being comfortable in every respect; and in brutes, as well as man, want of comfort operates on the digestive powers. If the surface of a stall, in which an ox or a horse stands deviates much from a level, he will continually be uneasy; and will be uneasy during the night, if its surface is rough, or if a proper bed of litter is not prepared every evening for him to repose on. The form of racks and mangers is often less commodious than it might be. A hay rack which projects forward is bad; because the animal in drawing out the hay, is teased with the hay seeds falling in its eyes or ears, and this form, it may be added is apt to cause the breath of the animal to ascend through its food, which must after a time, render it nauseous. For this reason, hay should lie as short a time as possible in lots, but when practicable, be given direct from the rack.—*Yankee Farmer.*

Fruit Trees.

The famous Pickman farm, in Salem, the best in the country, is lined round the borders of the field, with engrafted apple trees. These trees are very thrifty, deriving most of their nourishment from the ground under the walls, which keep the soil loose, warm and moist, and preserve the roots of the trees from external injury. The trees in this situation are an ornament to the farm, while they are no hindrance to the farmer in cultivating his field, nor injury to the crops by withdrawing nourishment, like those in the interior of the field. Yet those trees round the field, are believed to yield a greater profit than the annual crop within, with all the labor necessarily bestowed upon it—and the annual sales of the apples and fruit on this farm are said to be enough to purchase a farm of moderate dimensions in the interior of this State.—*Newburyport Herald.*

Apiaries.

We have received from Mr. John Searle, of Franklin, a pamphlet of twenty pages descriptive of a new and improved bee hive, of which he is the patentee, and containing, with cuts, ample directions for its use. It is very highly recommended by some of the most intelligent farmers in Merrimack County, who speak from practical knowledge, of its advantages, and we hazard nothing in recommending it to this vicinity who have bees. The great advantage of this apiary is that the honey is taken from it without the destruction of the bees, and the inmates are protected completely against the depredation of worms, millers and other vermin, as well as from the severity of the weather. Mr. Searle exhibited a model of his improvement at the last show of the Merrimack Co. Agricultural Society, and he would do well to have one at the exhibition of the Massachusetts Charitable Mechanics Association at Boston n September next.—*Claremont Eagle.*

Prevention of the Mildew on Peach and Nectarine Trees.

The following preventive of the mildew on Peach and Nectarine trees has simplicity, as well as the experience of many years, to reccommend it:—Take sulphur and rain or river water, proportions of two ounces of sulphur to every four gallons of water. Put the quantity which may be required into a copper or boiler, and let it (after it commences boiling) boil for half an hour; after which it may be taken out, or suffered to remain until it becomes of a tepid state, when it ought to be applied to the trees by means of the garden engine or syringe as in a common washing with water. The time for applying it is annually, as soon as the fruit is set and considered out of danger.—*Loudon.*

Inarching.

Dr. Hale mentions a very curious experiment which he made. He attached the eastern branch of a young tree to its neighbor by inarching, and its western branch to another neighbor in the same manner, and after they were united, he cut the stem of the middle tree from its roots, and thus left it hanging in the air by its two inarched arms, where it flourished with considerable vigor. —*Farmer and Gardener.*

From the Franklin Farmer.

There is no doubt of the correctness of the principle that improvement in quantity and quality of product may be effected by careful and judicious selection of seed. The principle is fully demonstrated in the practice of the writer of the following communication, so well known over the State as the able Secretary of the Senate, and not less deserving the equally honorable appellation of an excellent farmer.

A New Wheat.

To the Editor of the Franklin Farmer:

It is well known that every kind of grain may be improved by a judicious selection of seed. Four years ago, my wheat, when ripening, was taken with the rust. Walking through the field, I discovered some stalks which had escaped the rust, and the grains were large and plump. I gathered them, and by sowing every year since, they have increased so that I have just harvested about twenty acres. Comparing this wheat with the common red chaff bearded wheat, I have ascertained these results:

1st. It stands the frosts of winter much better.

2nd. It ripens several days sooner, and will generally escape the rust when the other will be injured by it.

3rd. The product is greater. I am convinced if the whole of my crop for the last four years had been of this kind of wheat, I would have made *at least* one-fourth more.

4th. The quality is better, the grain is fairer and will doubtless make whiter flour. JAS. STONESTREET.

The best Cow yet.

We have seen nothing among the stories of good cows, equal to one we can tell—and on better authority, too, than we think many of these stories are based.—Mr. Reuben Day, of this village, has a small, but very handsome three year old heifer, from the milk of which has been made, in three successive weeks, the following quantities of butter.

First Week—	15 lbs.	12 oz.
Second "	16 "	8 "
Third "	15 "	14 "

Mr. Day wishes us to tell the *whole story*—as we fear some other owners of good cows have not done.—His cow is fed three times a day, with a quart of Indian meal and a pint of oil meal. She is milked morning, noon and night; and the milk is set in the usual way. Three quarters of an acre of pasture is all the run she had, and a part of that has been mowed—such spots as the cow did not feed closely. For fear that some generous farmer may think of buying the cow for $99,99, Mr. Day wishes us to say that he must have the other cent, or keep the cow. And he knows how to *keep* her, too, or she would not give milk at this rate. Now if any one can beat this, and will give us the facts, we warrant Mr. Day will either swap cows with him, or buy an extra bushel of oil meal and try again.—*Peoples Press.*

From the Quarterly Review of Agriculture.

Agricultural Chemistry.

By HENRY R. MADDEN, Esq., L. R. C. S., Edinburgh.

2. INORGANIC OR MINERAL MANURES.—In our last we completed a short sketch of the composition of the animal, vegetable, and vegeto animal manures which compose our division of organic manures; we shall, therefore, at once proceed to make a similar examination of those substances belonging to the mineral kingdom, which farmers are in the habit of employing for the purpose of enriching their land.

We have before remarked, that these substances act in a manner totally distinct from organic manures, the reason of which is obvious, because they *cannot* be, from their nature, capable of supplying either of the four elements, viz: *carbon, oxygen, hydrogen,* or *nitrogen,* which, as we have so repeatedly stated, form the essential constitution of *all* plants: we must therefore look to other circumstances besides the mere nutrition of vegetables, in order to explain the true cause of those beneficial effects which, beyond doubt, result from their judicious employment.

The advantages to be gained by the use of mineral manures may obviously be either direct or indirect, according to the effect which they produce; for example, those substances which either alter the texture of the soil, or more especially such as supply saline matter to the plants themselves, may be said to be *directly* beneficial; whereas those which merely act as chemical agents in hastening the decomposition of the organic matter existing in the soil, can be said to be benefitting the plant in an *indirect* manner only. It will be impossible, however to form any subdivision of this class of manures, upon the above fact, as many of them act in both ways, and moreover, the whole subject is as yet involved in so much doubt, that we should well deserve the imputation of rashness, were we to attempt any classification of these substances founded upon their mode of action. The more important purely mineral manures are *lime,* its *carbonate,* or *chalk,* its *sulphate,* or *gypsum, marl, saltpetre, common salt,* and *kelp.*

LIME.—This is undoubtedly the most important of this class of manures, from which circumstance alone it well deserves to rank first in the list. Like all great benefits it has been most shamefully *abused,* but I think that it will be by no means difficult to prove that the fault lies entirely with the farmer, who unfortunately is far too apt to follow example blindly, in place of really examining the *principle* upon which the *practice* is *founded,* and without which success is always precarious, and often absolutely impossible. In the subsequent remarks which we propose to make upon this class of manures, it will be necessary to enter much more fully into practical details than we have hitherto done, as the whole success or failure of these manures may be said to depend almost entirely upon their mode of application, and I may here promise that many of the practical observations which I shall have to make, are derived from the excellent but now rare pamphlet on manures by the justly celebrated Arthur Young.

The action of lime upon soil differs entirely according to the state in which it is used, namely, in the form of *true lime, hot lime,* or in the state of *mild lime,* as it is termed, in assuming which condition it has undergone some most important chemical changes which we shall mention presently.

The *chemical* properties of lime, and its chemical action upon organic matter, must in the first instance occupy our attention, in order that the subsequent remarks upon its use as a manure may be clear and intelligible. Lime is ranked by chemists among the *alkaline earths,* by which term is meant those earthly substances which exhibit characters similar in many respects to the true caustic alkalies, *potass, soda,* &c.: it is always prepared by heating its native carbonate or lime-stone, to a temperature sufficiently high to drive off all the carbonic acid and water which it contains, so that were limestone composed of nothing else but *carbonate of lime* and water, pure lime alone would be left after burning; this however is never the case, as other substances, especially alumina, silica, iron, and often magnesia, occur mixed with the lime, but in good specimens these should be in very small quantities, as of course, I need hardly say that their presence diminishes the value of the specimen in direct proportion to their quantity.—On this account, the proportion of lime contained in any new specimen of limestone should be accurately determined before applying it to agricultural purposes, more especially if there should be any reason for suspecting the presence of magnesia, which we have so repeatedly said is injurious to vegetation, particularly in its caustic state. On this account we shall here give a few directions for the examination of limestone, which we trust will not be considered out of place. Let us suppose that the experimenter is not desirous of ascertaining the *exact* constitution of the limestone which he is about to examine, but merely wishes to discover whether it

contains any consider able quantity of magnesia, alumina, or iron.

1. Let him take a small quantity of the sample to be analyzed, say 100 grains dssolve it in one ounce of strong muriatic acid, (spirit of salt) mixed previously with about 2 ounces of pure water; when the effervescence (owing to the escape of the carbonic acid) has entirely ceased, if any thing is left undissolved it must be separated from the solution, by filtration through white blotting paper, and the insoluble matter when dried and weighed may be noted down as *silica*.

2. The operator must next add to the filtered fluid successive portions of *strong ammonia* (*hartshorn*) until the liquid smells of this substance; any thing which is thrown down during this operation must be likewise separated by filtration; this will consist of *alumina* and *iron*, the proportion of the latter being judged by the darkness of the color (pure *alumina* being white.)

3. The next step is to add to the fluid a solution of *oxolate of ammonia* (this should be prepared by a druggist) as long as any precipitate appears; this is the lime in combination with the oxalic acid.

4. Lastly, having again filtered the solution, add a small quantity of *carbonate of soda* (common *soda*) dissolved in water; if the former parts of the process have been performed carefully, no precipitate whatever will now appear, unless *magnesia* is present, so that the quantity of this substance may be judged by the proportion of this precipitate.

Difficult as this process may appear to those who have never performed any chemical analysis, still a very little practice will make it quite familiar, and it is the only method by which the presence of magnesia can be detected with unvarying certainty; at least without making use of chemical tests, which cannot be easily purchased, and are very troublesome to prepare. Should any one wish to render himself expert at the above operation, I should recommend his taking some specimens of limestone, and, repeating the process several times, until he arrives at the same results by each experiment. If the quantity of lime is wished, the precipitate of No. 3 must be carefully collected, dried, and weighed; and then, every 100 grains will denote 34 grains of pure lime, or 61 grains of carbonate of lime in the original specimen.

Whenever lime, in its pure or *hot* state, is exposed to the air, it has a very great tendency to return to the original form of carbonate; in undergoing which change it first absorbs a large quantity of water, and then assumes the form of slaked lime, or, according to chemical nomenclature, has become a *hydrate;* this hydrate in its turn, rapidly absorbs carbonic acid from the air, and thus, in no long period, the burnt lime returns to its original condition, with the only difference, that whereas it was formerly in large stony masses, it is now in the state of a fine powder. When the lime is completely slaked, and *partially* carbonated, it forms the substance termed *mild* lime by farmers.

Of these three conditions of lime, namely, the *hot*, the *mild* and the true *carbonate*, the first is possessed of by far the most energetic powers. The true carbonate of lime, in fact, differs completely in its action from the others. We must, therefore, of necessity, treat of each separately.

Hot Lime.—When any organic matter is mixed with hot lime, it undergoes putrefaction with much greater rapidity than when left to itself. The exact *cause* of this is not well known; but the immediate *changes* which the various substances undergo, especially in the case of vegetable matter, have been pretty accurately examined. Thus, for example, it has been proved, *first*, that *woody fibre*, *gum*, *sugar*, and many other vegetable matters, are converted into *humic acid*, with more or less rapidity, when kept in contact with hot lime, or any other chemical substances which possesses strong alkaline properties. *Secondly*, that this *humic acid*, when formed, unites with the lime, and generates a compound which is not very soluble in water, but is easily diffused through it. And, *lastly*, it has been proved that a very little lime is required to produce this compound with a large quantity of humic acid. For example, 28 grains of pure lime are capable of combining with no less than 318½ grains of this acid; so that the lime in this compound amounts to little more than 8 per cent.

To apply these facts, therefore, we may remark, that there is very little doubt, that changes similar, to those above mentioned take place, when hot lime is applied to soil; or, still more so in the case of lime composts.—At the same time, it is exceedingly probable, that during the production of *humate of lime** the (compound of lime and humic acid above mentioned,) other compounds are formed, many of which are very possibly soluble in water; at least if we may judge by the appearance presented by vegetable matter, after it has been long exposed to the action of this or any other alkaline matter. From these remarks it would appear, that the most important object to be gained by the application of hot lime, is the decomposition of *woody fibre*, and the consequent formation of *humate of lime*, and various soluble matters.

Mild Lime does not act by any means so powerfully as the preceding compound; in fact, it appears to have no effect whatever upon woody fibre. On the other hand, however, it is capable of uniting with the humic acid existing in the soil, precisely in the same manner as hot lime; on which account, Sir Humphrey Davy remarks, that mild lime is useful in preventing the too rapid decomposition of substances already dissolved; the truth of which is evident, when we call to mind the well established fact, namely, that organic substances, which of themselves are extremely liable to decomposition, may be rendered much more permanent, nay, often perfectly so, by entering into *chemical combination* with any *inorganic substance*. Pure carbonate of lime will be treated of under the head of chalk.

So much for the pure chemistry of this most important manure. We must, however, now proceed to what the majority of our readers will consider as by far the most interesting part of the subject, namely, the practical deductions to be drawn from the above remarks; or, in other words, the manner in which practice is to be guided by the principles above laid down.

First.—It is perfectly clear, that *hot lime* will be useful in all cases where there is an excess of undecomposed vegetable fibre, as in peat-soils, moors, heaths, &c.; in fact, in all places where the natural growth has not been interfered with for a great number of years; from which it follows, that hot lime will be a peculiarly useful application to old grass, which has lost heart from age, particularly if it is, at the same time, broken up for tillage.

Secondly.—Sir Humphrey Davy has proved, that hot lime, whether solid or dissolved, is injurious to growing plants. For example, he states that he has frequently killed grass by watering it with lime water. From this fact, therefore, it follows, that *hot lime* must be an extremely useful application where it is desired to free land of its spontaneous growth; as, for instance, in places overgrown with weeds.

Thirdly.—Hot lime is extremely useful in purifying (if we may be allowed the expression) the original herbage of moors, and other *uncultivated* grounds. The mode in which this is effected being somewhat interesting, we shall here say a few words upon the subject. It is generally allowed, that the finer grasses, &c., require richer food than those which are less valuable; and also that the same remark holds good, the lower we descend in the scale of vegetables: namely, that the lower the plant is, the more easily it is nourished by the contents of the *atmosphere;* and hence the less dependent it is upon the *soil* for its subsistence; the consequence of which is that when in the lapse of time, the soil of any spot becomes more and more exhausted, the most valuable and important grasses gradually die away, from the want of sufficient nourishment, and give place to those diminutive species, which so frequently constitute the herbage of the almost barren moors; these again, if moisture be present, give place, in their turn, to various mosses, &c., so that at last, unless the improving hand of man steps in to avert the doom, the spot will return to a state unfit for the support of any living plant with the exception of those which derive most, if not all, their nourishment from the surrounding air. Should it be otherwise how different the result!—For instance, should *hot lime* be applied, from the looseness of their texture this destroyer first attacks the mosses and all other useless plants, and thus converts them into useful manure, which, by being washed into the soil by genial showers, revives the seeds of those plants which grew there ages previously, and, in a comparatively short time, the lately unprofitable waste glows with the return of its pristine verdure. How beautifully many of my readers must have seen this exemplified, in the crops of white clover which so frequently appear, almost like magic, after the liming of some barren moor!

Fourthly.—Mild lime is a most useful application in all cases, where any of the above circumstances occur in *cultivated land*. For instance, if the lime is comparatively fresh, it is much safer to employ it in the mild form, when we desire to destroy weeds or other injurious plants, growing upon richly manured lands, which, from carelessness or other such cause, have been allowed to become foul; for, were the lime, in this instance, applied in its *caustic state*, although it would unquestionably kill the weeds, still, their destruction would be accompanied with a great unnecessary loss of manure.

Fifthly.—It sometimes occurs, more particularly in garden ground, that the crops become rank, from the existence of a superabundance of soluble manure, the evil effects of which can almost always be counteracted by a dressing of *mild lime*, which, by combining with the humic acid, renders a large quantity of the organic matter much less prone to decomposition, and likewise at the same time, less soluble; *humate of lime*, as before remarked being by no means very soluble in water. It may very probably be asked here, how can it be advantageous to apply lime in any case to soil, since it tends to render *soluble* matters *insoluble*, when it has all along been stated that the very reverse is the proper mode of preparing the food for plants? An answer to this question must, therefore, of course, be requisite. It must be observed, in the first place, that we have already stated that lime is useful chiefly in those cases where the organic matter, is *insoluble*, because it causes the formation of *humate of lime* and different *soluble* matters; all we have to account for therefore is, how humate of lime comes to be a useful manure? It may be remembered that I stated in No. 2, of this series, that humic acid was of itself "quite *insoluble* in water;" from the result, however, of some experiments published since that number was written, it appears that this statement is not strictly correct, for humic acid is *soluble* in water (more especially when newly formed,) except under particular circumstances, so that it is extremely probable that the humic acid derived from the slow decomposition of humate of lime, will at the moment of its liberation, be capable of dissolving in water, and thus of course become a useful manure. We shall now conclude our remarks upon lime with a few important cautions to be attended to in its application.

Mr. Arthur Young remarks, that the best directions for applying lime are those given by Mr. Craike of Arbigland, who advises, that the whole quantity of lime the farmer intends to apply to any field of moderate size, should be carted out and laid in a heap, at some spot where water can be obtained with the greatest facility. The whole is next to be thoroughly slaked; and *immediately* after it has cooled, which will take place in a day or two, the lime is to be recarted and spread over the surface of the land as equally as possible. Mr. Craike further remarks, that the more common method of laying down the lime in small heaps all over the field, and allowing it to slake by rain, is *very erroneous;* for in this instance it is very liable to get too much rain, which in place of merely slaking it, and thus reducing it to a fine powder, converts it into "running mortar," in which condition "it will neither spread easily, nor mix with the soil." On the same principle Mr. White observes, that both the lime and the soil should be perfectly dry at the time of application. The truth of these remarks could have been predicted by scientific examination alone, and it is at all times pleasing to discover that the *results* of successful practice directly correspond with the *indications* of true theory.—For example, there are many scientific objections to be made to the plan of laying the lime in small heaps all over the field in order to be slaked by the rain, in addition to the evident one, mentioned by Mr. Craike, namely, the formation of "running mortar." These are, 1st, that it exposes a far greater surface for the absorption of carbonic acid, which, as is evident from the remarks already made upon this subject, diminishes materially the effect of the lime. 2nd, It must necessarily be exposed for a much greater length of time, and consequently will most probably be entirely converted into *carbonate of lime;* or it must be spread upon the land during wet weather, which will of course render it far more difficult to incorporate properly with the soil.—And lastly, its being slaked by rain-water is directly injurious, as it has been proved that there is a greater quantity of carbonic acid present in the air, during dull than in bright weather, which gas will of course be absorbed by the rain, and thus carried to the lime, so as to increase still more the chances of its becoming carbonated. On the other hand, however, it is evident that all these objections may be obviated by adopting the simple, and, if we look to the result, the much more economical method proposed by Mr. Craike.

As to the period at which the lime should be applied, this must depend so much upon peculiar circumstances affecting each farmer differently, as convenience, leisure, &c., that it is impossible to fix the time so as to suit all persons. When, however, a choice can be made, summer is by far the best season according to Mr. Young, the reason of which is obviously because it is the driest period of the year, and likewise, when hot lime is used to destroy weeds, they are generally in their greatest vigor at that time, and consequently are capable of being destroyed more effectually.

The quantity of lime to be used is likewise a subject of considerable importance, but nevertheless is one which is apt to be far too much neglected; upon this subject Mr. A. Young is most explicit. "In common cases," says he, "the quantity should be guided by a *chemical analysis of the soil;*" and, beyond doubt, this is the only sure way of applying it with success. What, for instance, can be more absurd, than for a farmer to go on applying lime to his land, time after time, when

* I have continued to denominate this acid, humic acid, although I find that, latterly, especially in chemical works, the term *ulmic acid* has been substituted for it. I trust, however, that this will cause no confusion, as the difference is in the name only.

perhaps his soil is already loaded with calcareous matter? It is a well established fact, that an excess of any of the earthy ingredients of soil exerts a most important influence over the plants which grow there: this is remarkably the case with the natural productions of all soils. To such an extent, in fact, does this hold true, that a good botanist will tell with great accuracy the chemical nature of the soil, by the plants which he finds growing upon it. If this, therefore, takes place naturally, where seeds of all kinds must be constantly deposited on every species of soil; If, I repeat, *nature* thus arranges the plants according to the constitution of the soil, shall we deny that they have any effect upon cultivated plants? Shall we presume to say that *we* can grow all kinds of plants equally upon every variety of soil? most assuredly not. How, then, can that farmer expect to be successful, who, by constantly adding lime to soil already *calcareous*, at length increases this substance to such a degree that it is unfit for the support of any plants, except those which naturally prefer a soil of this description? That the above statement is not a mere *theoretical* objection, is most distinctly proved by many facts. Who, for example, does not know that *wheat* is an unprofitable crop upon light soils? Or, again, who would attempt to cultivate *turneps* upon strong clay? *Chemical analysis* likewise of the plants themselves prove most distinctly the influence which the earthy constituents of soil exert over the saline composition of the ashes of these plants. Thus M. Saussure found, that 100 parts of the ashes of the common fir contained 43 parts of carbonate of lime when grown on a limestone hill, whereas the same quantity contained only 29 parts when grown on granite; and again, the ashes of the leaves of the *Rhododendron ferrugineum* grown upon limestone contained 43 1-2 per cent. of chalk, whereas it yielded 16¾ per cent. only of that substance when cultivated upon a granite soil. There can be no doubt, moreover, that the *proportion* of the different constituents of the ashes of plants have the greatest influence upon the vigor and productiveness of the plant itself, and I have no hesitation in saying that the culture of plants (more especially the *garden culture of exotics*) will never be brought to any thing like perfection until they have *each and all* been submitted to *chemical* examination; the proportion of all their saline constituents accurately determined; and the nature of the soil for each chosen upon these grounds. I leave it to those interested in such matters to decide, whether it would not be worth their while to take the requisite steps for the accomplishment of such an undertaking.

On the other hand, however, a very large quantity of calcareous matter may naturally exist in soil, without rendering it unfit for the purposes of cultivation; for instance, it is stated by Mr. Cuthbert Johnson, in the "British Farmer's Magazine" for April 1837, that "the richest soils, on the banks of Parnel, in Somersetshire, contain more than *seventy per cent.* of chalk!" But we are all well aware that there are many peculiarities in the cropping of calcareous soils which must be attended to in order to insure success. Almost all soils, however, contain more or less of this substance, and it is remarked by Professor Low, that it "generally, though not always, exist in large quantities in the better, than in the inferior soils." None of these remarks, nevertheless, by any means favor the employment of lime upon *calcareous* soil, in addition to which the plea of not being able to succeed without it, will be shewn to be untenable, when we are treating of the "Economy of Manure;" consequently we may rest assured that Mr. Young's remark is perfectly true, namely that the quantity of lime must be judged by a *chemical analysis* of the soil.

Lastly, the farmer must always bear in mind that neither *hot* nor *mild lime* can act as a manure until it has become converted into *carbonate* or *humate*, and consequently that the fertilizing effect of these substances are produced *at the expense of the organic matter previously existing in the soil;* so that although lime is directly useful by calling into activity otherwise inert matter, nevertheless it undoubtedly *exhausts* the soil by so doing, and this of course should make the farmer cautious about repeating it too frequently; and he must be particularly careful lest he mistake the diminution of the productive power of soil, caused by the too frequent application of lime, for a proof that more lime is required, as in this way there is no doubt that many agriculturists have as it were *poisoned* their fields, by the very means by which they had hoped to effect a cure. The two apparently opposite effects of lime must also be born in mind, namely, that although it *increases* the solubility of *inert* vegetable matter, still it renders much *less soluble* those parts of the organic constituents of soil which have already become capable of solution.

[Remainder next week.]

Oyster Shells

Are frequently burnt into lime, to lay upon land. They are better manure when ground without burning, owing to the remains of animal matter in them. A good lime compost is the following: Spread on any platform under cover 6 inches of mould, then three inches of well burnt lime; slack it with water in which common salt has been dissolved, to the amount of 1½ lbs. of salt to each bushel of lime; cover it with six inches more of mould. Before laying it on the land, turn and mix this compost heap, and lay 300 bushels of it on each acre.—*Dr. Hooper.*

Holkham, the Seat of the Earl of Leicester.

The grounds, including gardens, and park, and forest, and meadows, and fields of corn, are bounded by a circumference of ten miles. Within this circumference is an artificial lake, regarded by many as the most superb in England. Walks and rides intersect these grounds in every convenient direction. Here you move under a triumphal arch; before you, arises soon a lofty obelisk; upon your right spreads out five hundred acres of barley; and anon you enter Lady Anne Coke's beautiful flower garden, planted by the taste of Chantrey. Sheep, whereof here are twenty-two hundred of the veritable South Down breed; cattle, of which there are three hundred belonging to the stock of Devonshire; milch-cows, whereof thirty constitute the dairy; horses, whereof fifty enjoy stalls at Holkham; tenantry, of whom two hundred are happy to ackowledge this excellent landlord; and laborers, of whom two thousand are said to be continually employed by him, meet your eye wherever it is turned; and nearly in the centre of this circumference stands the House of Holkham—a magnificent pile. It was erected about 80 years since by the Earl and Countess of Leicester. It consists of a large central building with four wings, and you are informed that, "measuring closely by all the angles," it is just one mile in circumference. The house is open for public inspection on two days of each week; and well may it thus be opened, for it contains treasures in tapestry, sculpture, and painting, that richly repay the visitor for his time and trouble. In this respect, as a repository of art, Holkham is one of the many valuable houses in England. There is in England no Louvre, England is truly rich in works of art; but they are scattered—a Claude here, a Titian there, and distant a hundred miles or more, amidst sculpture both ancient and modern, may be found a Salvator Rosa and a Raphael.—*Bentley's Miscellany.*

On the Application of Lime to Land.

Sir—In different parts of the country, there are three different modes of applying lime to the land: laying it hot from the kiln, in small heaps, over the field, and spreading it when slaked; laying it in one large heap in the middle of the field to slake, and then cart, or wheel, and spread: the other way, which is my plan, is evenly spreading the hot stones all over the field; which when they have laid a day or two and separate, then harrow, or scuffle in—not plough as some do, and then have the lime at the bottom, instead of the top. I have my opinion why this is the best; but I should much like to hear a scientific opinion on the subject, and explanation how the lime acts on the soil. In the hope that this may catch the attention of a reader of your publication, who possesses chemical knowledge, and that he will be good enough to address you on the subject, I remain, yours, &c. C. Hillyard.

Thorpelands, near Northampton, June 15.

I think it is worth the consideration of the English Agricultural Society, whether a prize should not be offered for the best essay on the chemical operation of lime on land.—*Farmer's (London) Magazine.*

Draining.

At one of the Agricultural meetings held in the Representative's Hall, the following among other instances of successful draining, was given.

Mr. Phinney's improvements have been extensive, substantial, and extraordinarily successful. He ditches and drains round the margin of his swamps, which communicate with the main ditch, as it is well known that much of the water, with which these swamps are filled, is either top-water or comes from springs in the neighboring hills; he then completely inverts the sod and lays it flat, rolling it where it is practicable. He does this with a plough prepared for that purpose if the nature of the lands admit of it; or otherwise with a bog hoe, and it can be done in this way at the rate of about $20 per acre. He sometimes takes advantage of the season; and when the frost is sufficiently out of the ground for the plough to penetrate about three inches, he turns over with success and ease this land upon which he could not go with a team, if the frost were entirely out. After the land is completely ditched and drained, and the sod completely inverted and rolled, he applies about 20 loads of compost manure to the acre, and sows his grass seed; and the land yields abundantly. He deems this kind of land, after such improvements are completed, as the most productive land among us. Formerly he was accustomed to sell this land at the rate of $3 per square rod for the right of digging the peat two spits or about five feet deep—this would give $480 per acre—he considers it now more valuable to be kept for grass.—*New Eng. Farmer.*

Strawberries.

We have found August the best season for transplanting strawberries; they will then get well set so as to produce a good crop the next year. If they are transplanted late in the fall or in the spring they will not usually produce many the next year; and if transplanted in August they will produce a better crop the next year than they would transplanted in the spring previous, for when transplanted in the spring the year previous to the production of the crop, there are usually too many vines and they are not so thrifty as those transplanted in August.

We think that the best and most economical method of raising strawberries is to take up all the vines in August, dig up the bed, manure it if necessary, and then set out the plants in the same place, or in another place, when a rotation of crops is necessary. This method requires less labor than to dig around the plants and destroy the weeds, and the plants will be more productive. In this way good crops may be produced each season, and the bed prepared in the best possible manner for another crop. If it be dry after the plants are transplanted, they should be watered.

Some kinds of strawberries cultivated in gardens, are of fine flavor, abundant bearers, and the size is so large that it is less work to pick and prepare the common field strawberry after they are picked. This fruit, with proper attention in the selection and cultivation, will prove a profitable crop for the market or for one's own use. From half a dozen plants of the running kind, and most all kinds do run, a hundred may be obtained in one season. So the expense of getting a supply of plants will be but a trifle.—*Yankee Farmer.*

Orchard Grass.

The Cocks foot grass, (Dactylis glomerata, L.) known in America by the name of Orchard grass, is an imperfect perennial, and grows naturally on dry sandy soil. It is a native of the United States. This grass may be known by its coarse appearance, both of the leaf and spike; and also by its whitish green hue. It is probably better adapted than any other to sow with clover, on lands intended for pasture. Its good properties consist in the early and rapid growth, and its resistantance of the drouth; but all agree, that to obtain its greatest value, it should be kept closely cropped. Sheep will pass over every other grass to feed upon it. If suffered to grow without being cropped, it becomes coarse and harsh. Col. Powel, of Pennsylvania, after cultivating it ten years declares it produces more pasturage than any artificial grass he has ever seen in America. After being fed very close, it has been found to afford good pasturage, after remaining five days at rest. It is suitable to all arable soils. It abounds in seeds which are easily gathered, on account of their peculiar lightness, (the bushel weighing from 12 to 14 lbs.) The seed should be spread on a floor, and sprinkled with water a day or two before it is sown, that it will swell and more readily vegetate. Two bushels of seed are sown to the acre, or half this quantity with clover. The Orchard grass should be cut early, except intended for seed, as it diminishes two-sevenths in value as hay, by being permitted to ripen its seeds. It will bear cutting as early as clover, and the latter swath is very abundant. After preparing the seed for sowing, to mix plaster of Paris is recommended. It is one of the most profitable grasses, and much of its success, depends upon the manner of sowing.

We noticed a few days since a small lot of this grass sown the last spring, a part of it had been cut and fed to cattle. Where it had been cut it was coming out again, and promises to make another crop in good time. It will be recollected by those who observed it last season, that the orchard grass stood the drouth better than any other; from what we have seen we are disposed to recommend it to our farming friends. But we would sow in land made rich with manure, in preference to any other, if we expected to reap immediate benefit.—*Yankee Farmer.*

Poultry Houses, Yard, &c.

The situation of the poultry house should be dry, and exposed either to the east or south-east so as to enjoy the sun's rays in winter as soon as he rises above the horizon.—Loudon. Where a set of houses are intended, then a situation should be fixed on, near or close to the farm yard, and with ample space around for the fowls to disperse over in the day time, and one or more ponds for the aquatic sorts. All must have access to a gravelled yard and to grass for range, and have clear water near. Great attention should be paid to cleanliness and white washing, not for appearance, but to destroy vermin.—*Arthur Young.*

"Thoughts on Bathing,"

By Dr. Alcott, constitute the July No. of "*Health Tracts.*" Here is a series of hints and reflections which if properly attended to, cannot fail to result in much good. They address themselves, not to one class of people in particular—but to all classes—not to one section of the country, but the whole nation—for as all are interested in the cause of health and cleanliness, so all should alike seek the best and simplest modes of promoting it. To all who can get hold of the article, we advise a thorough perusal—while for the benefit of those who are not thus favored, we copy the following summing up of the rules or principles set forth:

"1. Daily bathing is indispensible. First, that the skin may assist the lungs properly, in the great work of purifying the blood, and that our respiration may be easier and better. Secondly, That it may perform properly, the work of perspiration. Thirdly, That it may transmit healthful sympathies to the other parts of the system. Fourthly, To prevent diseases of various kinds. Fifthly, To harden the system, and enable it to bear more easily, the extremes of heat and cold.

2d. The cold bath—either the shower bath, the plunge in the tub, or stream, or pond, or the sponge or hand bath—is in general the most vigorating, besides most accessible.

3. By using suitable precautions, almost any person, however delicate or tender, may learn to use the cold bath, both with safety and advantage, in any of its forms.

4. We should endeavor to bathe when both body and mind are in the highest healthy state of vigor.

5. We should never use the cold bath when the temperature of our bodies is below the standard of health. A few degrees above are far more safe than a single degree below.

6. We should never remain in the water, or wet with the water, any longer than is just necessary to secure the re-action or glow of warmth.

7. The best hour for cold bathing, in every form, is about half way between breakfast and dinner; but the hour of rising, when more convenient, is by no means inappropriate. For the warm or tepid bath, the hour of retiring for sleep is one of the best.

8. We should seldom, if ever, bathe immediately after eating a meal."

Let these rules be followed, and we have no doubt it would do as much towards securing firm health and long life as any thing else that could be named.

Soap Suds a Specific for Nourishing Flowers.

A fair correspondent writes to us from Newton Stewart, in the following terms:—'Recently I happened to gather a beautiful pansey, and when tired of admiring it, tossed the toy aside, which partly, by accident, fell into a box full of soap suds. The said pansey had neither joint nor root, and you may judge of my surprise when, at the end of a day or two, I found it growing. From this time forward I watched it narrowly, and now find it, after the lapse of a fortnight, a goodly plant with several buds on it. Thinking water might produce the same effect, I placed a newly cropped pansey in an element, which, pure in itself is the medium of purity in everything else; but it withered and died on so spare a diet. By way of confirming the first experiment, I have since placed a slip of a rose tree and a pink in suds, and both are flourishing in great vigor in my dressing room. Should this accidental discovery prove useful to florists, it will afford sincere pleasure to your correspondent."—*Dumfries Courier.*

A Flax pulling Machine has been made use of successfully at New Jersey this season.

NOTICE.

The Second Fair of the ONONDAGA AND CORTLAND ASSOCIATION, will be held at Tully, on the first Wednesday of October next, for the exhibition of all kinds of Stock and Mechanics' products. All who feel interested are invited to attend. H. A. CHASE, *Sec'ry.*

Tully, August 24, 1839.–w&m1t

Miner's Patent Pump.

AMOS MINER'S SUPERIOR PATENT PUMPS, for Wells or Cisterns, manufactured by Dagget & Hanson, Jordon, Onondaga County; for sale at Bush & Velie's Store, Exchange street Rochester, N. Y. G. C. MAURER, Agent.
Aug 24 w&mtf

The Southern Cultivator,

Pulbished every alternate week, at Columbia, Maury county, Tennessee.

DEVOTED to Agriculture, Horticulture, Stock Farming, and General Improvement. From its location—in one of the wealthiest districts in the South West—and its already extensive and rapidly increasing circulation in Tennessee, Alabama, Mississippi, Kentucky, Arkansas, &c., offers superior inducements for Advertisements of every description. Aug. 3, 1839.

Morus Multicaulis Tree Agency.

THE subscriber now offers for sale some choice lots of the above Trees, warranted of the genuine kind. Also, some Brussa and Canton, now growing in different counties of this state, to be delivered in the fall, or on the ground as they now stand, viz:

In Cuyahoga county,	1 lot of		5,000
Do do	1	"	6,000
Do do	1	"	4,000
Do do	1	"	1,000
Do do	1	"	2,500
Do do	1	"	800
In Portage county	1	"	20,000
Do do	1	"	8,000
Do do	1	"	6,000
In Stark county	1	"	4,000
Do do	1	"	6,000

In Cuyahoga and Portage counties:

1 lot of Brussa	3,000	1 lot of Canton	3,000
1 " "	2,000	1 " "	6,000

Which will be sold in any quantity to suit purchasers, at fair prices, with others, the particulars of which are not yet received, by

JAMES HOUGHTON, Agent,
Cleveland City Seed Store.

☞ Persons who are desirous of disposing of their trees through my agency, are requested to forward particulars as early as possible, and the business will be transacted on liberal terms, and agencies are solicited. Cleveland, Ohio, Aug. 17–w3m-m1t

LOCKLING'S PLOUGH.

WHEREAS Nathan Lockling has appointed Joseph Lee, of the City of Rochester, his general Agent for the sale of Rights to Manufacture his Plough. All communications addressed as above will be promptly attended to.

The above Plough has been in successful opperation in the Counties of Genesee, Livingston and Monroe for three years past, and it is confidently recommended by the following highly respectable Farmers:—

L A Ward, Samuel P St. John, W H Steels, G W Stevens, E L Arment, Elijah Wilcox, E W Porter, Gideon Osborn, James D Mc Curdy, J H Consalus, Dyer Kingsley, Michael Dusbrach, W S Fullerton, R W Fitch, Jas. Hutchinson, Agent for James Wadsworth, Frederick Marshall, Egbert Coleman, James Abbott, Wm H Reynale, Luther Melion, Leander Bevery, S R T Wood, Darius Markham, J P Price, Wm Wells, Henry Wagoner, Othinal Bagler, Henry Kelsey, J T Beach, Joseph Bowers, W F Rees, P W Clark, Cyrus Jones, Eli Bullock, Dansville.

MR. LOCKLING—Sir, We hereby certify that we have used the Lockling Patent Plough, for some time and can safely recommend it to the consideration of the Farming Community as being the best article of the kind we have ever used. It turns a clean handsome furrow, and draws one-third easier than any Plough within our knowledge.

Judge Roseburgh, Groveland; Ezra Roseburgh, Brighton, Isaac Moore, do.; John Nutt Mt. Hope, John Stanley, do.; W H Scott, Geneseo, Gen. D McNair, do.; Horace Miller Mt Morris.

To N. LOCKLING, Esq. Hermitage, May 4, 1838.

Dear Sir—I consider your Lockling Patent Plough a perfect article. It runs deep and light, and makes a fine large furrow. I think it well worthy the attention of all farmers. Yours truly,
ANDREW JACKSON.

☞ It is warranted to run with one-third less labor, in any kind of ploughing than any other Plough now in existence.

JOSEPH LEE, General Agent,
June 10-w8m3t 41 Exchange-st, near the canal, Rochester.

Farmers save your own Clover Seed.

THE subscribers having purchased the exclusive right of making, using and vending, in the counties of Monroe and Niagara, RITTENHOUSE'S PATENT CLOVER MILL, being the latest improvement, and the article now used in Pennsylvania and in Seneca county, would respectfully inform the farmers of those counties, that they will this fall furnish one or more PORTABLE MILLS in each of said counties, to be worked by horse power, which they will take to farmer's barns whenever required, and hull out their CLOVER SEED for them at the very cheap rate of One Dollar per bushel.—These machines will hull from one to three bushels per hour, according to the quality of the chaff. FARMERS will at once perceive the vast saving and convenience afforded to them by this invention, as instead of paying from SIX to SIXTEEN Dollars per bushel for their Clover Seed, and perhaps getting a quantity of Canada Thistle or other foul seed in the bargain, they can now save their own seed, know that it is clean, and have it hulled at their own barns, for the trifling expense of One Dollar per bushel!

For further information, application can be made, either personally or by letter, (post paid,) to the subscribers at Gaines, Orleans county. CHANCY WOODWORTH & CO.
July 27, 1839.–w3m-m1t*

Morus Multicaulis.

THE subscriber is prepared to furnish Morus Multicaulis (Mulberry) Trees, in large or small quantities, delivered any time this fall after the first of October. The trees will be raised from Roots, Layers and Cuttings, of thrifty growth and matured wood, and will be sold at prices in proportion to their size. October and November are the most favorable months to transport them to the Western States, or into Canada, or in any direction where they must be sent a distance by water communication. All orders from a distance, by mail, should be sent early, (post paid,) addressed to

E. H. MIX,
July 27, 1839.–w6m Avon, N. Y.

Saxony Ewes.

THE Subscribers will let for a term of years, to responsible farmer, fifteen hundred Ewes, in lots of fifty or upwards, to be taken after weaning their lambs.

These Sheep belong to the White Springs flock, which is well known to be as fine as any in the cauntry.

Terms made known on application to either of the subscribers.

ROBERT C. NICHOLAS,
Geneva, July 6, 1839.–w3m JOHN NICHOLAS.

Agricultural Warehouse and Seed Store.

79 Barclay-street, New-York.

AT this old established stand, the subscribers take pleasure in announcing to the public, that they have made extensive arrangements to accommodate farmers in all articles connected with husbandry, viz:—Agricultural implements, a full and fresh supply of Field and Garden Seeds, Fruit Trees, Durham Cattle, Chinese and Berkshire pigs, 10,000 Morus multicaulis Mulberry trees; Publications on Rural subjects, &c.

Published here the Rural Library, S. Fleet, editor, a few copies of 1st vol. for sale. The object of this work is to constitute a Library at the least possible expense. 2d vol., commencing with Professor Low's Elements of Practical Agriculture, with nearly 250 fine engravigns; subscription $3. Subscriptions received for the Genesee Farmer, Cultivator, &c. &c. J. W. WEAVER & CO.
April 20-wm1y 76 Barlay-st, New-York

Great Sale of Improved Short Horn Cattle, and Blood Horses.

THE subscribers will sell at Auction, on Tuesday, the 10th day of September next, at the farm of Samuel Allen, on the Niagara river, two miles below Black Rock, the entire stock of Improved SHORT HORN CATTLE, for several years past bred on the farm of L. F. ALLEN, on Grand Island.

The herd consists of about 30, including COWS, BULLS, HEIFERS and CALVES. Several of them have been imported by one of the subscribers direct from England, and with their produce, are surpassed by few animals in the country. In addition to these, every animal offered is the direct descendant of thorough bred imported stock, and of unquestionable purity of blood.

With the above will be sold, 20 select and beautiful animals, consisting of pure DEVON; crosses of different degrees between the Devon and Improved Short Horn; crosses of the Alderney, and of the Ayrshire, with the Short Horn. These are cows, heifers and calves; all superior animals.

ALSO—The superb Horse "BELLFOUNDER," (got by Imported "Bellfounder," the best thorough bred trotting horse ever in America, and out of the imported Mare "Lady Allport," bred by T. T. Kissam, Esq. of Long Island. The stock of this horse is unsurpassed in the country for size, speed and action. Together with several elegant THOROUGH BRED BREEDING MARES, and Fillies, and two or three young horse Colts, the produce of the above. These animals are of the highest character as roadsters; and as trotters, no blood in the country has excelled them. They are all from the best stables of Long Island. Also, a beautiful pair of full bred matched Fillies, 5 years old. All these horses are blood bay.

This entire stock will be sold without reserve to the highest bidder, commencing at 10 o'clock, A. M. They can be shipped within an hour from the farm on board the steamboats to go up the lakes, or on board the canal boats at the farm. Catalogues of the animals, with descriptions and pedigrees, will be prepared, and the stock may be viewed at the farm previous to the sale.

A credit of 60 days will be given on approved notes, or acceptances, payable at a bank either in Buffalo, Albany, or New-York, for all sums over $300. LEWIS F. ALLEN.
Black Rock, N. Y. June 25, 1839. SAMUEL ALLEN.

GRINDSTONES,

OF a Superior quality and warranted. If they do not answer the expectations of the purchaser, they may be returned and the money refunded. For sale at the Rochester Edge Tool Manufactory, office on Front Street, a few rods north of Main Street bridge.
june 29–w3m-m1t U. R. BARTON.

Horse Rakes.

AS some inquiry has been made through this paper relative to Horse Rakes, the subscriber would take this opportunity to say to its patrons, and all others, that he is offering to the public the latest improved Revolving Horse Rake, which can be had at the following places:

Rochester—C. Hendrix. *Auburn*—Hyell, Watrous & Co. *Elmira*—Robert Cevell, jr. & Co. *Burdett*—E. Baker & Co. *Ovid*—P. Himrod & Son. *Geneva*—H. G. Bushnell. *Waterloo*—J. L. Lundy & Co. *Seneca Falls*—J. C. Chapman. *Geddes*—S. H. Mann. *Syracuse*—Wright & Wheaton. *Ithaca*—Wm. R. Collins. *Lenox*—Horace Hall. *Chittenango*— —— Crouse; and many other places not here mentioned.

Those who wish to purchase, would do well to give us a call.

AMOS HOLBROOK.
Whitesboro', June 12, 1839. jun 24

Fruit Trees for Sale.

THE subscriber respectfully informs his friends and the public that he has for sale at his Nursery in Rochester, Monroe county state of New York, a large quantity of Fruit Trees, grafted and inoculated with the most approved kinds, now fit for transplanting, which he will sell on the most reasonable terms.

April 15, 1838. SAMUEL MOULSON.

N. B. Cash will be paid for a few thousand two years old APPLE TREES.

Great and Timely Arrivals!

AT THE ROCHESTER SEED STORE.—The subscriber is happy to inform his friends and customers, that he has just received direct from England, a very large supply of imported Seeds, of such kinds, and in such quantities, as will meet the demands of the public, and of such quality as cannot fail to give satisfaction. Among them are,

1,500 lbs. English Purple Top Ruta Baga,
800 lbs. English and Scotch assorted Turnop,
650 lbs. Mangel Wurtzel,
300 lbs. French White and Yellow Sugar Beet,
175 lbs. Long Orange, and Altringham Carrot,
150 lbs. Yellow Dutch, and White Portugal Onion,
500 lbs. Cabbage, Cauliflower, Broccoli, and Radish,
450 lbs. White Dutch Clover, Trifolium Incarnatum.

Also—New Orchard Grass, Pacey's perennia and Italian Rye Grass, Spring Tares, Potatoe Oats, Winter Oats, many new varieties of Peas and Beans, together with a multitude of smaller articles.

Also—Nearly one hundred varieties of the choicest English FLOWER SEEDS. (These will speedily be put up in small papers, price 5 cents each, 50 cents per dozen.)

Also—Just received, a good supply of THORBURN'S CHINESE TREE CORN, and ROHAN POTATOES.

Orders already received will be immediately attended to.

All orders from a distance must contain a remittance, or good reference in this city.

☞ Agents will receive new supplies as soon as possible.
May 1, 1839. M. B. BATEHAM.

☞ *Oswego Agency.*—M. B. EDSON, Druggist, Oswego, is Agent for the Rochester Seed Store. A good assortment of Seeds may be found there.

Monroe Horticultural Garden and Nursery.

GREECE, MONROE COUNTY, N. Y.

THIS establishment now comprises over 20 acres, covered compactly with trees and plants in different stages of their growth.

The subscriber offers to the public a choice selection of Fruit Trees, of French, German, English and American varieties, consisting of Apples, Pears, Plums, Peaches, Cherries, Apricots, Nectarines, Qeinces, Currants, Gooseberries, Raspberries, Grape Vines, Strawberries, Ornamental Trees, Shrubs, Plants, Hardy Roses, Vines, Creepers, Herbaceous Perennial Plants, Bulbous Roots, Splendid Paonies, Double Dahlias, &c. &c.

Also, a large collection of Green House Plants, of choice and select varieties, in good condition.

Orders respectfully solicited. Trees and Plants, when ordered, are carefully selected and faithfully packed, and if desired, delivered on the Canal, one mile from the Nursery, or at Rochester.

Orders for Mr. Rowe's Nursery received by the publisher of this paper.

Catalogues will be sent to every applicant, gratis, or may be had by calling at the office of the Genesee Farmer.
April 1, 1838. ASA ROWE.